Remarks

This Amendment is responsive to the January 2, 2008 Office Action. Reexamination and reconsideration of claims 1-38 is respectfully requested.

Summary of The Office Action

Claims 1-3, 6, 8-11, 13-17, 28 and 30 were rejected under 35 U.S.C. §101 because the claimed invention is purportedly directed to non-statutory subject matter.

Claims 1-3, 7-9, 12-18, 23-30, and 37-38 were rejected under 35 U.S.C. 102(e) as purportedly being anticipated by Elzur et al. (Pub. No. US 2004/0093411 A1) (Elzur).

Claims 4-6, 10, 19-22 and 31-36 were rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Elzur in view of Delany et al. (US Patent 6,658,454 B1)(Delany).

Claim 11 was rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Elzur in view of Delany and Wright et al. (Pub. No. US 2005/0154825 A1) (Wright).

Current Amendments

Claim 39, dependent upon claim 2, has been added in order to further define "to pre-configure a topology of nodes" that communicate via a preferred networking protocol. The amendment is supported by at least pages 9-10, paragraph [0033] of the specification. Thus, no new matter has been added.

The Claims are Statutory Subject Matter under 35 U.S.C. §101

Claims 1-3, 6, 8-11, 13-17, 28 and 30 were rejected under 35 U.S.C. §101 as purportedly being directed towards non-statutory subject matter. The Office Action recites that "the claimed 'logic' is non-statutory subject matter since it is not a process, machine, manufacture nor composition of matter, nor is it recorded on some computer-readable medium." "Logic" is defined on page 7, in paragraph [0024] of the specification. A logic may be for example an application specific integrated circuit (ASIC), a programmable logic device, a combination of gates, and so on; which are all clearly patentable. Applicant respectfully requests further direction from the Examiner on how hardware like an ASIC is non-statutory.

The definition of logic on page 7, in paragraph [0024], is clearly directed at patentable subject matter. Therefore, the §101 rejection is contrary to the MPEP, case law, and Patent Office holdings. Claims 1-3, 6, 8-11, 13-17, 28 and 30 defines statutory subject matter and the rejection should be reversed.

The Claims Patentably Distinguish Over the References of Record

35 U.S.C. §102

Claims 1-3, 7-9, 12-18, 23-30 and 37-38 were rejected under 35 U.S.C. §102(e) as being anticipated by Elzur. For a 35 U.S.C. §102 reference to anticipate a claim, the reference must teach every element of the claim. Section 2131 of the MPEP recites:

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Here, the reference cited in the Office Action, Elzur, does not teach every element of the rejected claims. Elzur is directed at a multi-tier data center that may handle multiple different traffic types over a single fabric. (Elzur, Page 1, Abstract).

The data center produces systems with substantial power and space capabilities because the first tier may interface with secondary tiers to improve performance and reduce cost and complexity. (Elzur, Page 3, Paragraph [0034]). However, Elzur says nothing about pre-configuring a topology of nodes to communicate via a preferred network protocol.

Elzur describes a system and method for network interfacing. (Title) The summary describes the invention as providing a "data center" that includes several tiers. [0013] Elzur boldly asserts that it describes a device that can "handle all communication needs of a computer". [0033] These needs may be serviced by a TCP offload engine and an RDMA protocol that runs on top of TCP. [0033] The needs may also be met by a flow-through network interface card (NIC) that is optimized to minimize resources used to handle different traffic types and different interfaces. [0036] The network interface card may be multi-functional and support LAN traffic concurrently with TRP offload, iSCSI, and RDMA traffic. Clearly this RDMA and offload capable NIC is relevant to the claimed invention, but only as an example of conventional systems that do not perform pre-configured topology membership based connection management.

The Office Action relies on Fig. 6 as describing a system that includes an interface logic (e.g., SCSI [0043]). However, this SCSI interface does not appear able to pre-configure a topology of nodes as claimed and described. While the SCSI interface can "operate directly on application data and run complete ... protocol stacks," [0006], it is not described as being able to pre-configure a topology of nodes as claimed and described.

The Office Action on page 2, second to last paragraph, asserts that Fig. 6 and [0041] teach pre-configuring a topology of nodes. This figure, this paragraph, and indeed the entire reference only teach conventional SCSI processing and are completely silent about pre-configuring as claimed and described. For at least this reason, independent claims 1, 17, 18, and 23 are not anticipated by Elzur and are in condition for allowance. Accordingly, dependent claims 2-3, 7-9, 12-16, and 24-26 are similarly not anticipated and are in condition for allowance.

The Office Action, in the Response to Arguments, on page 16, point 7, re-asserts that the applicant's term "pre-configuring a topology of nodes" is just a simple computer network taught in Figure 8 of Elzur. This is incorrect. The specification at [0016] introduces "topology of nodes." Nodes can be mapped to a topology. Nodes may be for example, physical ports and logical addresses associated with the physical ports, which are individually mapped to a topology. [0017] – [0021] go into great detail about "topology of nodes." Applicant respectfully requests further response on how Elzur teaches the sophisticated "topology of nodes" described in [0016] – [0021]. Elzur teaches only conventional SCSI processing and is silent about pre-configuring a topology of nodes. On page 16, the Office Action recites:

> The term "preconfiguring a topology of nodes" applicant uses is just a computer network with associated devices such as disk. Fig. 8 of Elzur teaches exactly the "topology." Computers have been used for decades and *it is inherent* that the interface (e.g., SCSI or iSCSI) is configured to work with the processor of the computer to configure all or some of the associated devices. (Emphasis Added)

The "official notice" overlooks the recited elements.

The 1-2-08 Office Action on page 2, last paragraph, asserts that the command descriptor block (CDB) described in [0043] and [0008] is a mapping logic than can produce a mapping between a resource and a port on a first node. This is incorrect. It is known in the art that CDB is a data structure consisting of a one byte operation code followed by a few bytes of command-specific parameters. Therefore, a CDB is a data structure and/or interface upon which or through which actions may be performed. It is not a logic that does things. Therefore, it cannot possibly produce a mapping. It may store some data related to a mapping or allow the passing of some mapping data, but it cannot produce a mapping. The Office Action also asserts that the CDB selectively provides mapping data to a second node. This is also incorrect. Since the CDB does not produce a mapping, it cannot possibly provide that mapping to a second node. Even if the CDB does store or permit the passage of a mapping that is provided

to a second node, which it does not, it does not provide this mapping data selectively. To the extent the CDB provides any data, it does so non-selectively, according to conventional approaches that are unaware of pre-configured topology based connection management. "Logic" as defined in [0024] (see a so Statutory Subject Matter argument above) is far more than the data structure of the CDB.

Additionally, on page 16, point 8, in the Response to Arguments the Office Action asserts that the recited mapping logic is taught in [0043]. The Office Action states "During transmission, the host may get the SCSI CDB and the ISCSI context for a connection.' It is clear that the SCSI CDB works with the processor of the computer to establish the connection that is 'mapping.'" This is not correct. For instance, claim 1 recites the mapping logic being configured to produce a mapping between a resource located on a first node and a port on the same node. The SCSI CDB does not "work with" (implying a logic) the processor to establish a connection. The CDB is a simple data structure that tells the process to perform a simple operation. The SCSI CDB is not mapping logic configured to produce a map between resources. Therefore, the CDB does not "work with" the processor. As stated above CDB is a data structure and/or interface. In the context of the stated quote, the host "gets" the SCSI CDB and ISCSI context "for the connection." This does not imply that SCSI CDB is the logic mapping the resources between a device on the node and a port on the node.

The Office Action also asserts that the CDB selectively establishes a connection that facilitates the second node accessing the resource through the port [0041] using the preferred network protocol. This is also incorrect. Fig. 6 and the CDB merely describe an ISCSI that may provide control and data transfer functions, but not selective connection establishment over a preferred protocol. The data transfer portion may build ISCSI protocol data units (PDUs) from the SCSI CDBs it gets, but this is not selectively establishing a connection over a preferred protocol as claimed and described. This is using a connection

established in a standard way to move data structures (e.g., PDUs, CDBs) in a standard way. The data structures and/or interfaces are not logics. They are just data being moved around and/or the portals through which they move. For at least this additional reason independent claims 1 and 17 are not anticipated by Elzur and are, therefore, in condition for allowance. Accordingly, dependent claims 2-16 and 18 are also not anticipated and are in condition for allowance.

Additionally, on page 16-17, point 9, in the Response to Arguments, the Office Action asserts that the selective connection establishment over a preferred protocol is described in Elzur in [0033], lines 9-10, [0038], lines 8-9, and [0041], lines 7-8. In each of these cited passages the reference is merely describing standard network connections (TCP, iSCSI, RDM, multiple TCP ....). The cited sections of the reference do not teach a selective connection establishment over a "preferred protocol" as described and claimed. For at least this additional reason, independent claims 1 and 17 are not anticipated by Elzur and are in condition for allowance.

The Office Action asserts that [0024] teaches a connection management logic that controls where the mapping data will be provided and whether the connection will be established. This is incorrect. The Office Action relies on the converged network controller (CNC) illustrated in Fig. 7 and described in [0043]. Additionally, on page 17, point 10, in the Response to Arguments, the Office Action asserts that the selective connection establishment over a preferred protocol is described in Elzur in [0040] and Figure 7. The CNC may construct TCP segments, compute a CRC, insert a marker, and so on. However, the CNC does not control whether the mapping logic will provide mapping data and/or establish a connection. It simply does standard processing like that associated with prior art systems. For at least this additional reason, independent claims 1 and 17 are not anticipated by Elzur and are in condition for allowance. Accordingly, dependant claims 2-16 and 18 are also not anticipated and are in condition for allowance.

On page 17, point 11, in the Response to Arguments, the Office Action merely refers to points or sections 5-8 "above," which are the arguments from the previous Office Action. The arguments presented herein address these points.

Independent Claim 1

Claim 1 recites a system comprising an interface logic configured to pre-configure a topology of nodes. The Office Action cites Elzur Fig. 6, and [0041], line 5, and [0010], line 9 as teaching the claim element. (Office Action, Page 2). However, the cited text does not teach the claim limitation. Figure 6 of Elzur teaches a multi tier architecture data center that may handle different traffic types over a single fabric. (Elzur, page 3, paragraph [0039]). However, Figure 6 fails to teach pre-configuring a topology of nodes. Elzur paragraph [0041], line 5 and paragraph [0010], line 9 also fail to teach pre-configuring a topology of nodes. The text mentions small computer system interface (SCSI). SCSI is a set of standards for physically connecting and transferring data between computers and peripheral devices. However, the cited text makes no mention of pre-configuring a topology of nodes.

Claim 1 also recites a mapping logic. The Office Action cites Elzur paragraph [0043], line 2 and paragraph [0008], lines 5-6 as teaching a mapping logic. However, the CDB taught in the citing text of Elzur is not the mapping logic of claim 1. A CDB or command descriptor block is a block of bytes used in SCSI to send commands. Sending commands in SCSI does not anticipate a mapping logic. Therefore, Elzur does not anticipate claim 1, leaving it in condition for allowance.

Claim 2

This claim depends from claim 1, which has been shown not to be anticipated and thus this claim is similarly not anticipated. Furthermore, this claim recites the additional elements of acquiring a node identifier and topology configuration choice data. The Office Action asserts that the CDB and context for a connection described in [0043] describe the additional elements. This is incorrect. Since Elzur is not

concerned with pre-configuring a topology, it follows that Elzor does not teach acquiring identifiers and configuration choice data and then pre-configuring based on this data. In fact, the Elzur reference is directed toward a conventional system that has nothing to do with topology configuration using "choice data" as recited in claim 2. Additionally, the claim recites providing "a topology data concerning the topology to a member of the topology." Neither [0041] or [0043] teach this element. For these additional reasons this claim is not anticipated and is in condition for allowance.

Claim 7

This claim depends from claim 2, which has been shown not to be anticipated and thus this claim is similarly not anticipated. Furthermore, this claim further characterizes the topology data. Since Elzur does not process topology data as claimed and described, it follows that Elzur does not further characterize this missing data. In particular, Elzur is completely silent concerning specifying a fallback network protocol and a fallback path. The rejection simply refers to Fig. 6, which shows neither of these elements. For this additional reason this claim is not anticipated and is in condition for allowance.

Claim 8

This claim depends from claim 1, which has been shown not to be anticipated and thus this claim is similarly not anticipated. Furthermore, this claim recites the additional element of the interface logic controlling resource control actions. To the extent that any of these actions are controlled by the system in Elzur, they appear to be controlled by a central processing unit on a mother board, not on an RNIC as claimed and described. (e.g., Elzur, page 3, paragraph [0038]) For this additional reason this claim is not anticipated and is in condition for allowance.